STORMFORCE
ROOFING & MAINTENANCE LTD

Montpelier Primary School

Built in the 1960s, Montpelier Primary School is a mixture of single storey and two storey buildings, all of flat roof construction.

The 3500m² roof was made up of:

- Concrete deck
- Screed to falls
- 20mm Ashphalt
- Solar reflective paint

Several areas had been overlaid in the past with a 2 layer felt system that were deemed to be past their useful life and in need of renewal. Core samples were taken and moisture was found to be present. The ashphalt was found to be failing at junctions to upstands and over joints in the concrete deck. This suggested excessive movement or thermal shock was being experienced and the roof was therefore deemed to be no longer fit for purpose.

With no insulation in place, the client requested the installation of insulation to provide a roof covering with a thermal transmittance of no more than 0.25 W/m² K.

It was agreed with the client to run with a built up felt system, namely Marley Mach One.

Marley offer a warranted refurbishment with the following:-

- Flame free application – eliminating the risk of fire in an occupied building during application
- BBA certification – for up to 20 years
- AA classification when tested to BS 476: part 3: 1958 External fire exposure roof test
- Insurance backed guarantee when installed by an approved contractor
- Exceptional mechanical strength and dimensional stability
- High levels of SBS modification donates self-healing properties
- Factory applied mineral surface ensures solar protection and fully meets modern aesthetic standards
- Minimal disruption
- Pre-formed details to enhance speed of installation and ensure consistency of the finished detail

It was decided that the existing asphalt was in such poor condition that it could not be used as a vapour barrier so the Marley self adhesive vapour control layer was used, after first applying a quick drying bonding agent. In areas where water had spread between the concrete deck and the asphalt, the asphalt was removed prior to the application of the vapour barrier. To meet with building regulations code of practice part L, a 100mm high performance PIR rigid urethane insulation board was bonded using a high performance moisture curing polyurethane adhesive.

The Mach One high performance single layer waterproofing membrane was then applied using the specified moisture cured polyurethane adhesive with the laps being sealed by heat activation using hot air guns. All detail work was completed using Marley's system 600 cap sheet, again sealed by heat activation using hot air guns.

Eight weeks were allowed for completion of the works and all works were completed on time, within budget and with minimal disruption to the client.

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